



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,794	07/21/2003	Leonard Forbes	1303.108US1	6101
7590	01/11/2005		EXAMINER	
Schwegman, Lundberg, Woessner & Kluth, P.A. Attn: Marvin L. Beckman P.O. Box 2938 Minneapolis, MN 55402			ESTRADA, MICHELLE	
			ART UNIT	PAPER NUMBER
			2823	

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

G

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/623,794	FORBES ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Michelle Estrada	2823	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 29 October 2004.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) 39-47 is/are withdrawn from consideration.
- 5) Claim(s) 1-38 is/are allowed.
- 6) Claim(s) \_\_\_\_\_ is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. <u>20050106</u> .
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>5/12/04</u> .	6) <input type="checkbox"/> Other: _____.

**DETAILED ACTION*****Election/Restrictions***

Applicant's election with traverse of Species I (claims 1-17 and 34-38) in the reply filed on 10/29/04 is acknowledged. The traversal is on the ground(s) that claim 1 is generic to claims 18, 26, 39 and 45. In a phone interview on January 4, 2005 with Marvin L. Beekman, the Examiner agreed that claim 1 is generic only to claims 18 and 26. The Examiner explained that claim 1 is not generic to claims 39 and 45 because claim 1 is directed to annealing the wafer such that the wafer undergoes a surface transformation to transform the arrangement of the plurality of holes into a predetermined arrangement of at least one empty space within the wafer, wherein at least the one empty space forms the gettering site. Claims 39 and 45 are directed to another invention of having a gettering region and the formation of a gate. Mr. Beekman agreed with the Examiner explanation and requested one month to conform all of the claims to the non-elected species to fully embrace the allowable generic claim 1. See MPEP 809.02(c).

The requirement is still deemed proper and is therefore made FINAL.

This application is in condition for allowance except for the presence of claims 39-47 to an invention non-elected with traverse in the reply filed on 10/29/04. Applicant is given ONE MONTH or THIRTY DAYS from the date of this letter, whichever is longer, to cancel the noted claims or take other appropriate action (37 CFR 1.144). Failure to take action during this period will

be treated as authorization to cancel the noted claims by Examiner's Amendment and pass the case to issue. Extensions of time under 37 CFR 1.136(a) will not be permitted since this application will be passed to issue.

The prosecution of this case is closed except for consideration of the above matter.

***Allowable Subject Matter***

Claims 1-38 are allowed.

The following is an examiner's statement of reasons for allowance: with respect to claim 1, there is no disclosure in the prior art of annealing the wafer such that the wafer undergoes a surface transformation to transform the arrangement of the plurality of holes into a predetermined arrangement of at least one empty space within the wafer. With respect to claim 10, there is no disclosure in the prior art of annealing the wafer such that the wafer undergoes a surface transformation to transform the arrangement of the plurality of holes into a predetermined arrangement of at least one void within a volume of the wafer. With respect to claim 18, there is no disclosure in the prior art of annealing the semiconductor substrate such that the plurality of holes are transformed into at least one predetermined void in a gettering region within the semiconductor substrate. With respect to claim 26, there is no disclosure in the prior art of annealing the crystalline semiconductor such that the plurality of holes are transformed into at least one predetermined void in a gettering region within the semiconductor. With respect to claim 34, there is no disclosure in the prior art of

Art Unit: 2823

annealing the wafer such that the plurality of holes are transformed into a predetermined arrangement of at least one void within a predetermined size and shape.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle Estrada whose telephone number is 571-272-1858. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on 571-272-1855. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2800.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public

Art Unit: 2823

PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



George Fourson  
Primary Examiner  
Art Unit 2823



M Estrada  
January 7, 2005